

WE CLAIM:

1. A disk drive for use with a host electronic unit including spindle motor drive circuitry, the disk drive comprising:

a disk drive housing;

a spindle motor rotatably attached to the disk drive housing, the spindle motor including a stator;

a host connector attached to the disk drive housing, the host connector being operably connectable to the spindle motor drive circuitry for receiving electrical signals from the spindle motor drive circuitry for controlling the spindle motor; and

a stator electrical trace integrally formed upon the disk drive housing from the stator to the host connector for electrically connecting the stator and the host connector.

2. The disk drive of Claim 1 wherein the stator electrical trace is integrally formed upon the disk drive housing via an electroless plating process.

3. The disk drive of Claim 1 wherein the disk drive housing is formed of molded plastic.

4. The disk drive of Claim 1 wherein the disk drive housing has a groove formed therein, the stator electrical trace is formed within the groove.

5. The disk drive of Claim 1 wherein the host connector is integrally formed with the disk drive housing.

- 1 6. A disk drive for use with a host electronic unit, the disk drive comprising:
- 2 a disk drive housing;
- 3 a spindle motor rotatably attached to the disk drive housing, the spindle motor
- 4 including a stator;
- 5 spindle motor drive circuitry coupled to the disk drive housing, the spindle motor
- 6 drive circuitry being configured to generate electrical signals for controlling the spindle
- 7 motor;
- 8 a stator/spindle motor drive circuitry electrical trace integrally formed upon the
- 9 disk drive housing from the spindle motor drive circuitry to the stator for receiving
- 10 electrical signals from the spindle motor drive circuitry for controlling the spindle motor;
- 11 a host connector attached to the disk drive housing, the host connector being
- 12 operably connectable to the host electronic unit; and
- 13 a spindle motor drive circuitry/host connector electrical trace integrally formed
- 14 upon the disk drive housing from the spindle motor drive circuitry to the host connector
- 15 for electrically connecting the spindle motor drive circuitry with the host electronic unit.

1 7. A disk drive for use with a host electronic unit including actuator drive circuitry, the disk
2 drive comprising:

3 a disk drive housing;

4 a head stack assembly rotatably attached to the disk drive housing, the head stack
5 assembly including a coil portion;

6 a flex circuit cable operably connected to the coil portion;

7 a host connector attached to the disk drive housing, the host connector being
8 operably connectable to the actuator drive circuitry for receiving electrical signals from the
9 actuator drive circuitry for controlling movement of the head stack assembly; and

10 a coil electrical trace integrally formed upon the disk drive housing from the flex
11 circuit cable to the host connector for electrically connecting the coil portion and the host
12 connector.

1 8. The disk drive of Claim 7 wherein the coil electrical trace is integrally formed upon the
2 disk drive housing via an electroless plating process.

1 9. The disk drive of Claim 7 wherein the disk drive housing is formed of molded plastic.

1 10. The disk drive of Claim 7 wherein the disk drive housing has a groove formed therein,
2 the coil electrical trace is formed within the groove.

1 11. The disk drive of Claim 7 wherein the host connector is integrally formed with the disk
2 drive housing.

12. A disk drive for use with a host electronic unit, the disk drive comprising:
- a disk drive housing;
 - a head stack assembly rotatably attached to the disk drive housing, the head stack assembly including a coil portion;
 - a flex circuit cable operably connected to the coil portion;
 - actuator drive circuitry coupled to the disk drive housing, the actuator drive circuitry being configured to generate electrical signals for controlling the head stack assembly;
 - a flex circuit cable/actuator drive circuitry electrical trace integrally formed upon the disk drive housing from the actuator drive circuitry to the flex circuit cable for receiving electrical signals from the actuator drive circuitry for controlling the head stack assembly;
 - a host connector attached to the disk drive housing, the host connector being operably connectable to the host electronic unit; and
 - an actuator drive circuitry/host connector electrical trace integrally formed upon the disk drive housing from the actuator drive circuitry to the host connector for electrically connecting the actuator drive circuitry with the host electronic unit.

1 13. A disk drive for use with a host electronic unit including read channel circuitry, the disk
2 drive comprising:

3 a disk drive housing;

4 a head stack assembly rotatably attached to the disk drive housing;

5 a preamplifier operably connected to the head stack assembly;

6 a host connector attached to the disk drive housing, the host connector being
7 operably connectable to the read channel circuitry for receiving electrical signals from the
8 head stack assembly to the read channel circuitry; and

9 a preamplifier electrical trace integrally formed upon the disk drive housing from
10 the preamplifier to the host connector for electrically connecting the head stack assembly
11 and the host connector.

1 14. The disk drive of Claim 13 further comprises a flex circuit cable operably connected to
2 the head stack assembly and the preamplifier.

1 15. The disk drive of Claim 14 further comprises a flex circuit cable/preamplifier electrical
2 trace integrally formed upon the disk drive housing between the flex circuit cable and the
3 preamplifier.

1 16. The disk drive of Claim 15 wherein the flex circuit cable/preamplifier electrical trace is
2 integrally formed upon the disk drive housing via an electroless plating process.

1 17. The disk drive of Claim 13 wherein the preamplifier electrical trace is integrally formed
2 upon the disk drive housing via an electroless plating process.

1 18. The disk drive of Claim 13 wherein the disk drive housing is formed of molded plastic.

1 19. The disk drive of Claim 13 wherein the disk drive housing has a groove formed therein,
2 the preamplifier electrical trace is formed within the groove.

1 20. The disk drive of Claim 13 wherein the host connector is integrally formed with the disk
2 drive housing.

- 1 21. A disk drive for use with a host electronic unit, the disk drive comprising:
- 2 a disk drive housing;
- 3 a head stack assembly rotatably attached to the disk drive housing;
- 4 a preamplifier operably connected to the head stack assembly;
- 5 read channel circuitry configured to receive electrical signals from the head stack
- 6 assembly;
- 7 a preamplifier/read channel circuitry electrical trace integrally formed upon the
- 8 disk drive housing from the read channel circuitry to the preamplifier for receiving
- 9 electrical signals by the read channel circuitry from the preamplifier from the head stack
- 10 assembly;
- 11 a host connector attached to the disk drive housing, the host connector being
- 12 operably connectable to the host electronic unit; and
- 13 a read channel circuitry/host connector electrical trace integrally formed upon the
- 14 disk drive housing from the read channel circuitry to the host connector for electrically
- 15 connecting the read channel circuitry with the host electronic unit.